- PSITTACULA DELICIOSA Ridgw. Pr. U. S. Nat. Mus. x. p. 529 (1887); Sharpe, Hand-list, ii. p. 19, n. 12 (1900); Dub. Syn. Av. p. 1053 (1903).

Psittacula gujanensis part., Salvad. Cat. B. xx. p. 251 (1891).

I had united *P. deliciosa* (of Lower Amazonia) with *P. guianensis*, from which Dr. Sharpe separates it.

Brotogerys Vig.

Brotogerys virescens (Gm.); Schulz, Orn. Monatsber. viii. pp. 56-57 (breeding) (1900).

Brotogerys pyrrhopterus (Lath.); Salvad. & Festa, Boll. Mus. Tor. no. 368, p. 25 (Ecuador occ.) (1900).

Brotogerys Jugularis (Müll.); Salvad. & Festa, Boll. Mus. Tor. no. 339, p. 9 (1899).

Brotogerys deviller (G. R. Gr.); Berl. & Hartert, Nov. Zool. ix. p. 109 (Orinoco Region) (1902).

Brotogerys Chiriri (Vieill.); Allen, Bull. Am. Mus. N. H. v. p. 141 (Chapada) (1893); Salvad. Boll. Mus. Tor. no. 378, p. 12 (Urucum) (1900).

Brotogerys Tui (Gm.); Forb. & Robins. Bull. Liverp. Mus. i. p. 13 (1897).

Three specimens, marked females, in the Liverpool Museum have the yellow streak behind the eyes, a feature which I thought peculiar to the males.

[To be continued.]

XXIX.—On the Birds collected by Mr. Walter Goodfellow on the Volcano of Apo and in its Vicinity, in South-east Mindanao, Philippine Islands. By W. R. Ogilvie-Grant.

(Plates XVIII. & XIX.)

The present contribution to the ornithology of the Philippine Islands contains an account of an important collection of Ser. VIII.—vol. VI. 2 H

Birds recently acquired by the British Museum. It was made by Mr. Walter Goodfellow during the early months of 1905 on the Volcano of Apo and in the neighbouring coast-district of South-east Mindanao.

The late Mr. John Whitehead's memorable visit to the Philippine Archipelago in 1894–1897 added greatly to our knowledge of the avifauna of the northern and central islands, as is shown by his papers in 'The Ibis'*, but he was never able to explore the interior of Mindanao, for when he returned to Manila in February 1899, with that object in view, the Americans had but recently taken over the government of the Philippines from the Spaniards, and it was considered unsafe to travel in the interior of the lawless southern island. Subsequently, as will be remembered, Whitehead visited the island of Hainan and obtained many fine new birds in the Five-Finger Mountains before he was struck down by a malignant fever and died in May 1899 (cf. P. Z. S. 1900, pp. 457–504).

It was considered certain by those who had studied the ornithology of the Philippines that Mindanao with its high mountain-ranges must contain many prizes for the traveller who could manage to penetrate to the interior and collect there. Personally I fully expected that the island would yield novelties as fine as those discovered by Whitehead in the highlands of Luzon, but, so far, this does not appear to have been the case; for though many new species have been already discovered, the avifauna of Mindanao is not nearly so remarkable and varied as that of Luzon. Such birds as Callacops periophthalmica, Pyrrhula leucogenis, Loxia luzoniensis, Chlorura brunneiventris, Chimarrhornis bicolor, and Tribura seebohmi, so far as we are at present aware, are not represented; while Pitta kochi, Ptilopus marchei, and Prioniturus montanus are infinitely finer forms than any which

^{*} For Part I. see Ibis, 1894, pp. 406–411; Part II. t. c. pp. 501–522; Part III. Ibis, 1895, pp. 106–117; Part IV. t. c. pp. 249–267; Part V. t. c. pp. 433–472; Part VI. Ibis, 1896, pp. 101–128; Part VII. t. c. pp. 457–477; Part VIII. t. c. pp. 525–565; Part IX. Ibis, 1897, pp. 209–250.

have been found in Mindanao. Again, the genus Zosterornis is represented by four species in Luzon, but by only two in Mindanao, while Luzon has produced two species of Oriolus (O. isabellæ and O. albiloris) which have no known representatives in the southern island. It must, however, be remembered that the greater part of the highlands of Mindanao is still untouched.

Mr. Goodfellow's first visit to Mindanao was made in 1903, when he landed at Davao on the south-east coast and ascended the Apo Volcano. His journey was indertaken largely with the object of obtaining living examples of new or little-known birds; but he also made a small collection of skins, which subsequently found its way to the Tring Museum, and the novelties of which were described by Dr. Hartert (cf. Bull. B. O. C. xiv. no. c. pp. 10-15). This collection proved of such interest that Mr. Rothschild shortly after called the attention of the well-known collector, Mr. Waterstradt, to Mt. Apo, and the latter discovered there several additional new species (cf. Bull. B. O. C. xiv. no. evi. p. 71, and no. evii. pp. 79, 80).

Meanwhile the Americans had not been idle, and the novelties collected by the various members of the Philippine Scientific Association have been described by Major Mearns [cf. Proc. Biol. Soc. Washington, xviii. pp. 1-8, 73, and 83-90 (1905)].

Finally, as already stated, in 1905 Mr. Goodfellow again visited his collecting-ground on the Apo Volcano, and procured a large series of birds, the subject of the present memoir; and though many of the more remarkable species in this collection had been already described by Dr. Hartert, Mr. Rothschild, and Major Mearns, seven additional new species were discovered, viz.:—

Sarcops metanonotus, Pericrocotus joknstoniæ, Rhinomyias goodfellowi, Chrysocolaptes montanus, Ceyx goodfellowi, Pseudoptynx mindanensis, and Ptilocolpa mindanensis.

No less than nineteen species represented in the present collection are new to the British Museum, viz.:—

Lamprocorax todayensis.
Goodfellowia miranda.
Æthopyga boltoni.
Zosterops goodfellowi.
Hyloterpe apoensis.
Turdus kelleri.
Brachypteryx mindanensis.
Pseudotharrhaleus unicolor.
Pericrocotus johnstoniæ.
Stoparola nigriloris.

Rhinomyias goodfellowi.
Rhipidura nigrocinnamomea.
Muscicapula montigena.
Chrysocolaptes montanus.
Ceyx goodfellowi.
Prioniturus waterstradti.
Trichoglossus johnstoniæ.
Pseudoptynx mindanensis.
Ptilocolpa mindanensis.

Among other species of special interest I may call attention to the Javan Ground-Thrush (*Geocichla andromeda*). The unexpected discovery of this species on Mt. Apo indicates a very remarkable extension of the bird's known geographical range. The occurrence of the Philippine Cuckoo-Falcon (*Baza magnirostris*), one of the rarest of the Accipitres, is also worthy of note.

While on his way to Formosa, Mr. Goodfellow was kind enough to write out his field-notes on the species of which he had obtained examples in Mindanao. These notes he posted to me from Ceylon, but the packet was unfortunately lost in the post and has never been recovered.

For the sake of brevity, Messrs. McGregor and Worcester's work, 'A Hand-list of the Birds of the Philippine Islands,' pp. 1-123 (1906), is quoted as "McGregor & Worcester."

The following is a list of the localities in which collections were made:—

Davao, south-east coast of Mindanao.

Punta Cabatam, south-east coast of Mindanao.

Apo Volcano (7000-8000 ft.), interior of South-east Mindanao.

Taudaya, Apo Volcano (5000 ft.), interior of South-east Mindanao.

Samal Island, off South-east Mindanao.

1. Lamprocorax todayensis.

Lamprocorax todayensis Mearns, Pr. Biol. Soc. Wash. xviii. p. 88 (1905); McGregor & Worcester, p. 109.

a. ♀. Taudaya, 5000 ft., March. No. 302.

"Iris ruby-red; bill and feet black."

Only one adult female example of this small species of Glossy Starling was preserved, as, unfortunately, Mr. Goodfellow did not observe the differences between this bird and the coast form, *L. panayensis*, until he returned to Davao and compared the two.

As in the type specimen of the present species, the throat is more decidedly glossed with violet-purple than it is in *L. panayensis*, while both the bill and the tarsus are considerably shorter and much less robust.

L. todayensis, \circ adult: total length ca. 6.2 inches; culmen 0.58; wing 3.9; tail 2.45; tarsus 0.8.

L. panayensis, \(\pi \) adult: total length ca. 6.9 inches; culmen 0.7; wing 3.9; tail 2.7; tarsus 0.97.

This form is new to the British Museum.

2. Lamprocorax panayensis.

Lamprocorax panayensis (Scop.); McGregor & Worcester, p. 109.

a-c. ♂ ♀ adult et ♀ imm. Davao, Feb. Nos. 127, 145, 148.

"Iris ruby-red; bill black; feet black, soles whitish."

3. SARCOPS MELANONOTUS.

Sarcops melanonotus Grant, Bull. B. O. C. xvi. p. 100 (1906).

a-e. & ♀. Davao, Feb. and March. Nos. 108, 125, 194, 312, 318.

f. 3. Piso, April. No. 481.

All the Bald Starlings collected by Mr. Goodfellow in South-east Mindanao belong to the dark-backed form of Sarcops. I have already pointed out at some length (cf. 'Ibis,' 1895, pp. 258–260; 1896, p. 469) that the grey-backed form is only found west of about long. 122°, while the dark-backed form only occurs to the east of that line.

All the additional material, such as that in the Steere Collection, which has been acquired by the Museum since 1896, goes to prove that my conclusions were correct, and I therefore propose to separate the dark-backed Eastern form under this heading.

In the islands of Marinduque, Guimaras, and Basilan we find birds referable to both forms, some being typical greybacked *S. calvus*, while others have the back distinctly blackish and approach the typical eastern form.

Adult male and female. Differ from S. calvus in having the upper back deep brownish-black.

"Iris brownish-red; bill black; bare skin on head whitishpink; feet black."

S. calvus (Linn. ex Briss.) was a name given to the grey-backed bird, probably from Manila.

Gymnops griseus Cuv., Meyen, is merely a synonym of the last name.

"Eulabes tricolor Müll." [cf. Gray, Hand-list Birds, ii. p. 19 (1870)] appears to refer to Corvus tricolor Müll. Syst. Nat. Suppl. p. 85 (1776), and, if so, has been referred to Sarcops by mistake.

4. Goodfellowia miranda.

Goodfellowia miranda Hartert, Bull. B. O. C. xiv. no. c. p. 11 (1903); McGregor & Worcester, p. 108.

 $\ensuremath{\mathfrak{F}}$ e
. Mt. Apo, 8000 ft., Feb. and March. Nos. 166, 219, 222, 237, 241, 247, 250, 264, 277, 284, 290.

"Iris dark brown, bare skin round eyes yellow; bill yellow, shading into greenish-yellow at the base; toes dirty olive or blackish-olive; legs olive-yellow."

A fine series of Goodfellow's Starling was procured; it is new to the British Museum.

5. Dicrurus striatus.

Dicrurus striatus Tweed.; McGregor & Worcester, p. 107. a. \(\gamma\). Mt. Apo, 7000 ft., March. No. 295.

b-e. ♂ ♀. Piso, March and April. Nos. 322, 329, 341, 476.

"Iris dark brown; bill and feet black."

6. Oriolus chinensis.

Oriolus chinensis Linn.; McGregor & Worcester, p. 106. a-f. ♂ ♀ et ♀ imm. Davao, Feb. and March. Nos. 105, 109, 113, 121, 141, 316.

3. "Iris brown, eyelids pink; bill pink, lighter at the tip; feet bluish-grey; claws pinkish-grey."

?. "Iris reddish-brown, cyclids purplish-red; bill coral-pink; feet bluish-slate."

\$\phi\$ imm. "Iris deep reddish; bill pinkish-black; feet grey." Adult females of this Oriole from Luzon, Marinduque, and Catanduanes have the upper parts much yellower than birds from the more southern Philippine Islands, only the lower part of the back being slightly washed with olive. In adult females from Samar, Cebu, Negros, Guimaras, Bohol, Mindanao, and Basilan the entire mantle and back below the yellow nape are strongly washed with olive, in marked contrast with the rump and upper tail-coverts. Though these differences are possibly not of very great importance, it seems worth while to draw attention to them. The males from Luzon &c. are indistinguishable from those found in Mindanao and other southern islands.

In the 'Hand-list of the Birds of the Philippine Islands,' by McGregor and Worcester, I find a footnote by the latter, in which he states that I was mistaken in believing that the type of O. steeri came from Negros, and that O. nigrostriatus Bourns and Worcester was a synonym of that species. If Mr. Worcester will examine the 'Catalogue of Birds of the Brit. Mus.' iii. p. 213 (1877), he will find there Dr. Sharpe's original description of O. steerii, and see that the type, which came from Negros and not from Basilan, is now in the British Museum. Dr. Sharpe, in his description of O. steerii, subsequently published in the Trans. Linn. Soc. (2) i. p. 329, quotes the 'Catalogue of Birds,' so that the former was obviously published at a later date. The Basilan Oriole, as already pointed out (cf. 'Ibis,' 1896, pp. 532, 533), must therefore stand as O. basilanicus Grant.

7. Anthus Maculatus.

Anthus maculatus Hodgs. ; McGregor & Worcester, p. 101. a, b. $\mathfrak P$. Mt. Apo, 8000 ft., Feb. and March. Nos. 189, 256.

The two freshly moulted female examples collected by Mr. Goodfellow near the summit of the Volcano have the upper parts of a brighter olive-green than any specimen to be found among the large series in the British Museum Collection. The dark stripes on the feathers of the back are also unusually distinct. In other respects the Mt. Apo birds agree with typical A. maculatus, and are no doubt correctly referred to that species

They measure respectively:—Wing 3.21, tail 2.3 inches; wing 3.2, tail 2.2 inches.

"Iris reddish; bill black, shading into pinkish towards the base; feet and nails pale flesh-coloured."

8. Anthus gustavi.

Anthus gustavi Swinh.; McGregor & Worcester, p. 102.

a. ♀. Davao, April. No. 492.

"Iris light brown; upper mandible light brown, lower creamy-white; feet flesh-coloured."

This Pipit has been recorded from most of the islands in the Archipelago.

9. Anthothreptes chlorogaster.

Anthreptes chlorigaster Sharpe; McGregor & Worcester, p. 100.

a. & imm. Davao, May. No. 461

"Iris deep red; bill dark brown; feet bright olive-green, soles yellow."

10. Cinnyris jugularis.

Cinnyris jugularis (Linn.); McGregor & Worcester, p. 99. a. 3. Davao, May. No. 451.

"Iris dark brown; bill and feet black."

11. ÆTHOPYGA BOLTONI.

Æthopyga boltoni Mearns, Pr. Biol. Soc. Washington, xviii. p. 4 (1905); McGregor & Worcester, p. 98.

a, b. ∂. Mt. Apo, 8000 ft., Feb. and March. Nos. 202, 244.



- 1. HYPOCRYPTADIUS CINNAMOMEUS
 - 2. RHINOMYIAS GOODFELLOWI.

"Iris red; bill black; feet black, soles yellowish; nails black."

This beautiful Sun-bird is new to the British Museum.

12. Hypocryptadius cinnamomeus. (Plate XVIII. fig. 1.) Hypocryptadius cinnamomeus Hartert, Bull. B. O. C. xiv. no. c. p. 13 (1903); McGregor & Worcester, p. 96.

a-g. ♂♀. Mt. Apo, 8000 ft., Feb., March. Nos. 177, 178, 183, 186, 187, 230, 299.

"Iris reddish, light brownish-red, or yellowish-red; bill pale greyish-blue at the base, blackish towards the tip; feet pale bluish-grey, soles yellowish."

I agree with Dr. Hartert in placing this very remarkable bird in close proximity to the genus Zosterops.

13. Zosterops goodfellowi.

Zosterops goodfellowi Hartert, Bull. B. O. C. xiv. no. c. p. 13 (1903); McGregor & Worcester, p. 96.

a-d. ♂♀. Mt. Apo, 8000 ft., Feb. and March. Nos. 176, 182, 184, 271.

"Iris crimson; bill black; feet greyish-olive."

This interesting species, new to the British Museum, appears to belong to the aberrant section of the genus Zosterops which lacks the white ring round the eye. In other respects it seems to be most nearly allied to Z. frontalis Reichenb. from the mountains of Java.

14. Zosterops Basilanica.

Zosterops basilanica Steere; McGregor & Worcester, p. 95.

a, b. ♂ ♀. Taudaya, 5000 ft., March. No. 272.

"Iris pale reddish-gold (in male) or pale brownish-yellow (in female); bill black; feet grey."

15. Zosterops vulcani.

Zosterops whiteheadi vulcani Hartert, Bull. B. O. C. xiv. no. c. p. 14 (1903).

Zosterops vulcani McGregor & Worcester, p. 95.

а. д. Mt. Apo, 8000 ft., Feb. No. 159.

"Iris pale grey; bill black; feet dark grey."

This form appears to differ from Z. whiteheadi, Hartert, in having the breast and belly of a more dusky soiled white. In well made-up skins there is a faint band of yellow down the middle of the breast and belly.

The British Museum contains a series of this species collected by Mr. Waterstradt.

16. DENDROPHILA LILACEA.

Callisitta lilacea (Whitehead); McGregor & Worcester, p. 94.

a-f. \Diamond ♀. Mt. Apo, 8000 ft., Feb., March. Nos. 161, 179, 205, 213, 245, 276.

"Iris bright greenish-yellow, rim of cyclids chrome-yellow, bare skin round the eye and bill greenish-yellow; feet olive-green."

This species is easily recognised from *D. anochlamys* Sharpe by having the feathers below the eye and the earcoverts violet instead of blue. This character, which is perhaps the most important difference between the two species, has not been previously noticed.

The two immature specimens of *Dendrophila* procured by Whitehead at Cape Engaño, N.E. coast of Luzon, and referred by me to *D. mesoleuca* (cf. 'Ibis,' 1896, p. 119), are probably immature specimens of *D. ænochlamys*, *D. mesoleuca* being confined to the high mountains of East Luzon.

The localities given by McGregor and Worcester, t. c. p. 94, for "Callisitta anochlamys" are incorrect, for the bird found in Leyte, Mindanao, and Basilan is D. lilacea.

17. Parus mindanensis.

Pardaliparus elegans mindanensis Mearns, Pr. Biol. Scc. Washington, xviii. p. 8 (1905).

Pardaliparus mindanensis McGregor & Worcester, p. 94. a-e. ♂♀. Mt. Apo, 8000 ft., Feb. and March. Nos. 163, 181, 188, 198, 286.

"Iris black (in the male) or reddish-brown (in the female); bill black; feet pale bluish-grey (in the male) or dark slate (in the female)."

The specimens collected by Mr. Goodfellow bear out the

characters attributed to this form by Major Mearns: it appears to be a fairly well-marked subspecies.

18. Hyloterpe apoensis.

Hyloterpe apoensis Mearns, Pr. Biol. Soc. Washington, xviii. p. 86 (1905); McGregor & Worcester, p. 93.

a-c. ♂ ♀ . Mt. Apo, 8000 ft., Feb., March. Nos. 173, 190, 224.

d. 3. Piso, May. No. 432.

"Iris reddish-brown or dark brown; bill black; feet pale grey or bluish-grey, nails pink."

The type of *H. philippinensis* Walden [cf. Ann. & Mag. N. H. (4) x. p. 252 (1872)] was a male procured by Dr. A. B. Meyer in Luzon. Additional examples of this species were obtained by Whitehead on Mt. Arajat, Central Luzon, and in the Province of Albay, in the southeast of that island, in 1893–1894 [cf. 'Ibis,' 1894, p. 409, and 1895, p. 254].

In 1896 the British Museum acquired the Steere Collection, which included a series of specimens of Hyloterpe from Samar and Basilan, while the Tweeddale Collection contained two examples from Dinagat, collected by A. II. Everett. All these birds differ constantly from the Luzon specimens in having the mantle and back olive-green instead of olivebrown, and very closely resemble the birds from Mt. Apo and Piso, S.E. Mindanao, which have recently been described as H. apoensis. The only difference between the latter and the birds from Samar &c. appears to be that, as a rule, the crown of the head is rather browner in the Samar birds, and the ear-coverts are of a more rufous tint. These differences. however, are not always constant, for one female specimen in the Steere Collection, from Catbalogan in Samar, has the crown of the head as dark as in the Mindanao birds, and the ear-coverts are but slightly more rufous. Under these circumstances I prefer to include the specimens from Samar, Levte, Dinagat, and Basilan with those from Mt. Apo, Mindanao, under the title of H, apoensis.

The male obtained by Mr. Goodfellow on Mt. Apo at

8000 ft. differs in no way from the male procured by him at Piso on the S.E. coast of Mindanao.

19. Lanius lucionensis.

Otomela lucionensis (Linn.); McGregor & Worcester, p. 92.

a, b. ♂ ♀. Taudaya, 5000 ft., March. Nos. 211, 303.

c. d. Mt. Apo, 8000 ft., March. No. 305.

"Iris reddish-brown; bill black, becoming white towards the base of the lower mandible; feet blackish."

20. Megalurus ruficeps.

Megalurus ruficeps Tweedd.; McGregor & Worcester, p. 89.

a. d. Daliaon, May. No. 457.

"Iris pale burnt-sienna; upper mandible light brown, lower whitish; feet and nails pale flesh-coloured."

21. Orthotomus frontalis.

Orthotomus frontalis Sharpe; McGregor & Worcester, p. 88.

a. d. Daliaon, May. No. 456.

"Iris pale chestnut; upper mandible dark brown, lower flesh-coloured at the base; feet light brownish flesh-coloured."

22. Acrocephalus orientalis.

Acrocephalus orientalis (Temm. & Schl.); McGregor & Worcester, p. 87.

a, b. ○. Banks of Davao River, April. Nos. 386, 402. c-e. ♂♀. Davao, April. Nos. 403, 414, 418.

"Iris pale golden-brown; upper mandible light brown, lower cream-coloured; feet and nails pale bluish-grey."

23. LOCUSTELLA OCHOTENSIS.

Locustella ochotensis (Midd.); McGregor & Worcester, p. 87.

a. 3. Banks of Davao River, April. No. 398.

b. J. Davao, April. No. 406.

"Iris light brown; upper mandible brown, lower creamywhite; feet and nails flesh-coloured or brownish."

24. Copsychus mindanensis.

Copsychus mindanensis (Gmel.); McGregor & Worcester, p. 86.

a, b. 3. Davao, March and April. Nos. 313, 400.

c, d. ♂ ♀. Piso, May. Nos. 425, 435.

"Iris from very dark brown to black; bill black; feet black, soles yellow."

25. Monticola solitarius.

Monticola solitaria (P. L. S. Müller); Grant, Ibis, 1894, p. 509.

Petrophila manilla (Bodd.); McGregor & Worcester, p. 85.

a. ♀. Davao, Feb. No. 116.

b, c. J. Piso, April. Nos. 335, 474.

"Iris dark brown (in the male) or reddish-brown (in the female); bill black; feet blackish-brown."

26. Turdus obscurus.

Turdus obscurus (Gmel.); McGregor & Worcester, p. 84. a, b. J. Mt. Apo, 8000 ft., Feb., March. Nos. 152, 216.

"Iris dark reddish-brown; upper mandible black, lower yellowish towards the base; feet dirty yellow, nails light horn-coloured."

27. Turdus kelleri.

Merula kelleri Mearns, Pr. Biol. Soc. Washington, xviii. p. 6 (1905); McGregor & Worcester, p. 83.

a-h. $3 \circ et \circ imm$. Mt. Apo, 8000 ft., Feb., March. Nos. 150, 162, 165, 172, 203, 214, 292, 298.

"Iris brown; rim of eyelid, bill, feet, and nails yellow."

This Blackbird was represented in the first collection sent home by Mr. Goodfellow in 1903; but Dr. Hartert, having only one adult specimen, refrained from describing it.

It is new to the British Museum.

28. Geocichla andromeda.

Geocichla andromeda (Temm.); Seebohm, Monogr. Turdidæ, i. p. 77, pl. xxv. (1898).

a, b. 3. Mt. Apo, 8000 ft., Feb. Nos. 158, 497.

"Iris dark brown; bill black, slightly yellow round the gape; feet and nails ashy pink."

The occurrence of this Ground-Thrush on Mt. Apo is one of the most interesting of Mr. Goodfellow's discoveries. Hitherto it was only known from the mountains of Java, Lombock, and Engaño, for though it was stated by Temminck to be found also on the island of Sumatra, its occurrence there has not been confirmed by recent explorers. It had also been doubtfully recorded from Timor by Schlegel.

The two adult males agree in every particular with adult birds from Java and Lombock.

29. Brachypteryx mindanensis.

Brachypteryx mindanensis Mearns, Pr. Biol. Soc. Washington, xviii. p. 3 (1905); McGregor & Worcester, p. 83.

a. 3. Taudaya, 5000 ft., March. No. 300.

"Iris, bill, and feet black."

I have somewhat doubtfully referred this specimen (a fully adult male) to B. mindanensis, having only one male available for comparison. According to Major Mearns, the Mt. Apo bird is larger than B. brunneiceps, Grant, from Negros; but the comparative measurements of our specimens shew the reverse to be the case, the wing of our Mt. Apo bird measuring 2.45 inches against 2.65–2.7 in the Negros bird. The tail (somewhat worn) in our specimen measures 2.0 inches, whereas Major Mearns gives 2.47 as the measurement of the tail in his male of B. mindanensis.

He further states that the male type has no trace of grey on the belly, but in our bird, which is perhaps not quite adult, there is a very distinct streak of light smoky-grey down the middle of the belly. It is very unlikely that our male bird should belong to a species different from the type of B. mindanensis, which was procured in the same locality, but the description of that species certainly does not agree with it.

30. Macronus mindanensis.

Macronus mindanensis Steere: Grant, Ibis, 1897, p. 231: McGregor & Worcester, p. 82.

a. d. Mt. Apo, 8000 ft., March. No. 273.

b, c. 3. Davao, March, May. Nos. 308, 454.

"Iris pale bluish-grey; bill black; feet ashy-brown or light slate."

The examples of the Hairy-backed Babbler from Davao, on the south-west coast, do not differ from the specimens procured on Mt. Apo at 8000 ft.

31. Zosterornis capitalis.

Zosterornis capitalis (Tweedd.); Grant, Ibis, 1897, p. 233; McGregor & Worcester, p. 82.

a. d. Piso, May. No. 422.

b. ♀. Mapugba River, May. No. 434.

Male. "Iris light bright red; upper mandible dark slate-coloured, lower light slate-coloured; feet light slate-coloured."

Female. "Iris light reddish-gold; upper mandible dark lead-coloured, lower pale lead-coloured; feet pale grey."

These specimens agree well with the type from Dinagat.

32. PSEUDOTHARRHALEUS UNICOLOR.

Pseudotharrhaleus unicolor Hartert, Bull. B. O. C. xiv. no. evi. p. 74 (1904); McGregor & Worcester, p. 80.

Pseudotharrhaleus griseipectus Mearns, Pr. Biol. Soc. Washington, xviii. p. 2 (1905); McGregor & Worcester, p. 81. a, b. ♂♀. Mt. Apo, 8000 ft., Feb. and March. Nos. 153, 255.

"Iris dark brown; bill black; feet and nails rusty-brown (in the male), dull reddish-brown (in the female)."

I have no doubt that *P. griseipectus* Mearns merely represents the adult plumage of *P. unicolor* Hartert; the birds procured by Mr. Goodfellow agree perfectly with Major Mearns's description, and I have compared them with the type of *P. unicolor*, which is undoubtedly in immature plumage. The species is new to the British Museum.

33. Pycnonotus goiavier.

Pycnonotus goiavier (Scop.); McGregor & Worcester, p. 80. $a, b. \exists \$? Davao, Feb. Nos. 129, 143.

"Iris, bill, and feet black."

34. Poliolophus urostictus.

Poliolophus urostictus (Salvad.); McGregor & Worcester, p. 79.

a. d. Davao, May. No. 443.

"Iris brown, thick fleshy eyelids bright yellow; bill black; feet lead-coloured."

35. IOLE PHILIPPENSIS.

Iole philippensis (Gmel.); McGregor & Worcester, p. 79. a-d. J. Davao, Feb. Nos. 101, 104, 131, 192.

e. d. Piso, April. No. 350.

"Iris brownish-red or dull red; bill black; feet brownish-black,"

36. IOLE EVERETTI.

Iole everetti Tweedd.; Grant, Ibis, 1897, p. 228; McGregor & Worcester, p. 79.

a. d. Mapugba R., May. No. 426.

"Iris dark red; bill leaden; feet pinkish ash-coloured."

37. Pericrocotus johnstoniæ. (Plate XIX.)

Pericrocotus johnstoniæ Grant, Bull. B. O. C. xvi. p. 18 (1905).

 $a, b. \notin \mathcal{G}$. Mt. Apo, 7000 ft., March. Nos. 215, 257. (Types of the species.)

c, d. ♀ et ♂ imm. Mt. Apo, 7000 ft., March. Nos. 233, 294.

Adult male. Most nearly allied to P. croceus, Sharpe, from the south of the Malay Peninsula, but differs in having an oblong orange-yellow mark on the terminal portion of the outer web of the six median secondary quills; the chin and throat glossy black, like the crown and mantle, and the breast and under parts deep yellow, less tinged with orange. The tail-feathers are black, tipped with orange, increasing in width, so that the outer pairs have the terminal half orange.

"Iris, bill, and feet black."

Total length about 6.5 inches; wing 3.3; tail 3.2; tarsus 0.6.

Adult female. Differs considerably from the female of P. croceus in having a narrow bright yellow band across the



G. E. LODGE, DEL.

WITHERBY & CO., SCULP. ET IMP.

forehead, continued backwards over the lores in a short superciliary stripe; the chin, throat, and all the yellow parts of the plumage bright yellow instead of orange; and the six median secondary quills with an oblong yellow mark on the terminal half of the outer web.

From the female of *P. leytensis*, Steere, it is easily distinguished by the narrower and much brighter yellow band across the forehead, as well as by the shining blackish grey crown and mantle.

38. ARTAMIDES KOCHI.

Artamides kochi Kutter; McGregor & Worcester, p. 76. Artamides mindanensis Steere; Grant, Ibis, 1897, p. 224. a. \(\text{2} \). Mt. Apo, 8000 ft., March. No. 269.

b-d. ♂ ♀. Davao, March. Nos. 317, 325, 326.

e–i. ♂♀. Piso, March, April. Nos. 323, 339, 358, 361, 362.

"Iris pale creamy-white or pale straw-coloured; bill and feet black."

39. STOPAROLA NIGRILORIS.

Stoparola panayensis nigriloris Hartert, Bull. B. O. C. xiv. p. 80 (1904).

Eumyias nigriloris McGregor & Worcester, p. 76.

a-f. ♂ ♀. Mt. Apo, 8000 ft., Feb., March. Nos. 154, 180, 185, 217, 227, 238.

"Iris reddish-brown; bill and feet black."

The specimens collected by Mr. Goodfellow shew all the characteristics pointed out by Dr. Hartert in his original diagnosis. The species is new to the British Museum.

40. CRYPTOLOPHA MINDANENSIS.

Cryptolopha mindanensis Hartert, Bull. B. O. C. xiv. p. 12 (1903).

This new species was discovered by Mr. Goodfellow during his first expedition to Mt. Apo, but is not represented in the present collection. The unique type, a female, is in the Tring Museum.

41. RHINOMYIAS RUFICAUDA.

Rhinomyias ruficauda (Sharpe); Grant, Ibis, 1897, p. 225; McGregor & Worcester, p. 75.

a. d. Maputi, May. No. 424.

b-d. ♂ ♀. Piso, April and May. Nos. 374, 379, 439.

"Iris dark brown; bill and inside of mouth black; feet ash- or greyish-flesh-coloured."

42. Rhinomyias goodfellowi Grant, Bull. B. O. C. xvi. p. 17 (1905).

a. \circ . Mt. Apo, 8000 ft., March. No. 235. (Type of the species.)

Adult female. General colour above, including the wings and tail, dark slate, shading into dull black on the top of the head and ear-coverts; a narrow white band across the base of the bill, continued over the lores in a narrow superciliary stripe; lores and feathers surrounding the upper eyelid black; chin, throat, middle of breast, belly, and under tail-coverts whitish; chest, sides, and flanks brownish-buff; axillaries, under wing-coverts, and inner edge of quills whitish.

"Iris dark reddish-brown; bill black; feet ashy-grey."
Total length ca. 6.2 inches; culmen 0.85; wing 3.5; tail 2.7; tarsus 0.85.

This fine species appears to be quite distinct from all the members of the genus previously described, being at once recognisable by the dark slate-colour of the upper parts. It is new to the British Museum.

43. Zeocephus cinnamomeus.

Zeocephus cinnamomeus Sharpe; McGregor & Worcester, p. 74.

a. ♀. Piso, May. No. 428.

"Iris very dark brown, rim of cyclids cobalt-blue; bill greyish-cobalt, shading into black at the tip; feet greyish-cobalt,"

44. RHIPIDURA NIGRO-CINNAMOMEA.

Rhipidura nigrocinnamomea Hartert, B. O. C. xiv. p. 12 (1903).

a-c. ♂♀. Mt. Apo, 8000 ft., Feb. Nos. 119, 201, 204. "Iris, bill, and feet black."

The male of this remarkably distinct Flycatcher is new to the British Museum. It appears to have no close ally.

45. Hypothymis superciliaris.

Hypothymis superciliaris Sharpe; McGregor & Worcester, p. 73.

a. d. Piso, May. No. 433.

"Iris dark brown; bill and feet black."

46. Hypothymis azurea.

Hypothymis azurea (Bodd.); Grant, Ibis, 1897, p. 224. Hypothymis occipitalis (Vig.); McGregor & Worcester, p. 73.

a. d. Davao, April. No. 388.

b. & imm. Piso, March. No. 328.

"Iris black; bill blue, black towards the extreme tip; feet slate-coloured."

47. Muscicapula montigena.

Muscicapula montigena Mearns, Pr. Biol. Soc. Washington, xviii. p. 8 (1905); McGregor & Worcester, p. 72.

a-c. ♂♀. Mt. Apo, 8000 ft., Feb., March. Nos. 170, 254, 282.

"Iris and bill black; feet shining silver."

This little Flycatcher is closely related to *M. luzoniensis* Grant and *M. nigrorum* Whitehead, but is easily distinguished from the latter by the reddish-olive outer edges of the quills and by the chestnut upper tail-coverts and tail-feathers in the male. This species is new to the British Museum.

48. Muscicapula Westermanni.

Muscicapula westermanni Sharpe; McGregor & Worcester, p. 72.

a. d. Mt. Apo, 8000 ft., March. No. 242.

"Iris and bill black; feet shining black."

49. SIPHIA PHILIPPINENSIS.

Siphia philippinensis Sharpe; Grant, Ibis, 1896, p. 464. Cyornis philippinensis McGregor & Worcester, p. 72.

a-i. ♂♀. Davao, Feb. to May. Nos. 111, 117, 321, 385, 394, 450, 453, 455, 458.

"Iris very dark brown; bill black, inside of mouth black; feet and nails reddish slate-coloured, ash-grey, or silvery-grey."

Male examples of the Philippine Red-breasted Flycatcher from Luzon have the rufous of the throat, as a rule, continued right up to the black on the chin. Typical birds from the central islands usually have the top of the throat slightly paler, sometimes inclining to whitish, and in one of the specimens (No. 450) collected by Mr. Goodfellow on the south-east coast of Mindanao the top of the throat is pure white. In an example from Basilan (Steere Coll.) this character is even more marked. I have examined the fine series now available from the various Philippine Islands, but cannot see that it is possible to recognise more than one form. The most that can be said is that in birds from the north the throat is, on the whole, more rufous and uniform in colour, while in those from the central and southern islands the throat is usually a trifle paler above, and sometimes even white.

50. PITTA ERYTHROGASTER.

Pitta erythrogaster Temm.; McGregor & Worcester, p. 68. $a, b. \ 3 \ \circ$. Davao, May. Nos. 412, 460.

Male. "Iris dark brown; bill brownish-black; feet ashy-grey."

Female. "Iris sepia-brown; bill black; feet light slate-coloured."

51. THRIPONAX JAVENSIS.

Thriponax javensis (Horsf.); McGregor & Worcester, p. 66. a, A vix ad. Davao, Feb. No. 130.

b. d. Piso, April. No. 338.

3 adult. "Iris red; upper mandible black, lower light slate; feet dull slate-coloured."

3 vix adult. "Iris yellowish cream-coloured; upper mandible black, lower light horn; feet dirty slate-coloured."

The bird from Davao killed in February has the black breast-feathers more or less edged with buff, especially down the middle of the chest; in the male killed at Piso in April only one or two feathers shew traces of buff edgings; both birds appear to be fully adult, so probably these buff edgings are characteristic of the freshly moulted feathers and soon disappear by abrasion.

52. Chrysocolaptes lucidus.

Chrysocolaptes lucidus (Scop.); McGregor & Worcester, p. 65.

a. ♀ imm. Davao, April. No. 391.

"Iris bright red; upper mandible light greyish-black, lower pale greyish-green."

The immature female from the coast has less red on the wing-coverts and mantle than the adult, but is easily distinguished from *C. montanus* of Mt. Apo.

53. Chrysocolaptes montanus.

Chrysocolaptes montanus Grant, Bull. B. O. C. xvi. p. 16 (1905).

a-d. ♂ ♀ et ♀ imm. Mt. Apo, 8000 ft., Feb., March. Nos. 160, 210, 212, 275. (Types of the species.)

e, f. 3. Piso, April. Nos. 351, 352.

Adult male and female differ from the male and female of C. lucidus in having the mantle and wing-coverts orange with scarcely a tinge of crimson. In the female also the top of the head and occipital crest are orange, not washed with crimson.

In the male the "iris is red, the upper mandible black, the lower greenish-yellow, and the feet blackish-grey."

In the female the "iris is ruby-red, the upper mandible black, the lower greenish-yellow, and the feet greyish-olive."

Total length about 9.5 inches; culmen 1.5; wing 5.2; tail 2.9; tarsus 1.1.

In C. lucidus the greater part of the wing-coverts and the

outer margins of the secondaries are crimson, giving the whole wing a crimson appearance, whereas in the present form, though some of the males have narrow crimson-orange edges to the wing-coverts, the general colour of the wings is distinctly orange.

This form may be regarded as a partially alpine representative of *C. lucidus*, of which it is no doubt a subspecies; it also occurs on the coast, for two fully adult male specimens were procured at Piso, which, according to Mr. Goodfellow's letter, is a locality on the south-east coast of Mindanao, about fifty miles from Davao. From the latter locality, as recorded above, we have received a typical specimen of *C. lucidus*.

This subspecies is new to the British Museum.

54. Inngipious fulvifasciatus.

Yungipicus fulvifusciatus Hargitt; McGregor & Worcester, p. 65.

a. d. Davao, Feb. No. 146.

b, c. ♂ ♀. Mt. Apo, 8000 ft., March. Nos. 270, 274.

d. ♀. Piso, April. No. 359.

"Iris ruby-red; upper mandible black, lower pale slate-coloured at the base; feet olive-grey."

55. Хантногема нематосернага.

Xantholæma hæmatocephalum (P. L. S. Müll.); McGregor & Worcester, p. 64.

a-c. $3 \circ$. Piso, April. Nos. 336, 346, 347.

d. d. Davao, April. No. 404.

"Iris brown, eyelids crimson; bill black; feet coral-red, nails black."

56. Centropus melanops.

Centropus melanops Less.; Grant, Ibis, 1897, p. 247; McGregor & Worcester, p. 64.

a. ♀. Piso, April. No. 337.

"Iris ruby-red; bill and feet black."

57. Centropus viridis.

Centropus viridis (Scop.); Grant, Ibis, 1897, p. 247; McGregor & Worcester, p. 63. a. d. Daliaon, 4th Feb. No. 132.

b-d. ♂♀. Davao, Feb., April, May. Nos. 135, 444, 494. "Iris ruby-red; bill black or slate-coloured; feet black or light slate-coloured."

In the female specimen the under wing-coverts are almost entirely rufous, in the males they are blackish.

58. Eudynamis mindanensis.

Eudynamis mindanensis Linn.; Grant, Ibis, 1897, p. 247; McGregor & Worcester, p. 63.

a-d. ♂♀. Davao, April and May. Nos. 405, 407, 463, 491.

"Iris ruby-red; bill pale greenish-grey or very pale yellowish-green; feet light greenish slate-coloured or slate-coloured."

59. CACOMANTIS MERULINUS.

Cacomantis merulinus (Scop.); McGregor & Worcester, p. 62.

a, b. ♂ vix ad. Mt. Apo, 8000 ft., Feb. & March. Nos. 164, 249.

"Iris yellowish-brown, rim of eyelids bright yellow; bill black, greenish-yellow towards the base; feet yellow."

60. Pyrotrogon ardens.

Pyrotrogon ardens (Temm.); McGregor & Worcester, p. 60. a-c. ♂ ♀. Mt. Apo, 8000 ft., Feb. and March. Nos. 156, 260, 267.

d, e. ♂ ♀. Piso, April. Nos. 357, 382.

f. d. Maputi, May. No. 421.

"Male. Iris dark brown; bare skin of face bright blueviolet; bill bright leaf-green, shading into bright yellow at the tip; feet bright blue, nails chrome-yellow."

"Female. Iris dark brown; bare skin of face bright violet, shading into bright blue about the bill; bill as in male; feet blue, pinkish-mauve or slate-coloured, nails orange."

61. Macropteryx comata.

Macropteryx comata Tickell: Grant, Ibis, 1895, p. 409; 1896, p. 555.

Macropteryx comata major Hartert, Nov. Zool. iv. p. 11 (1897).

Macropteryx major McGregor & Worcester, p. 58.

a. ♀. Piso, March. No. 327.

"Iris dark brown; bill and feet black."

Dr. Hartert has separated the Tree-Swifts from the Philippine Islands on account of their longer wing-measurements, but the difference does not appear to me to be constant or to warrant this distinction; the wing-measurement varies from 5.0 to 5.55 inches, and in the present instance is 5.1.

62. Caprimulgus manillensis.

Caprimulgus manillensis Wald.; Grant & Whitehead, Ibis, 1898, p. 246; Oates & Reid, Cat. Birds' Eggs Brit. Mus. iii. p. 68, pl. i. fig. 9 (1903); McGregor & Worcester, p. 57.

a. ♀. Piso, April. No. 343.

"Iris golden; bill black; feet brownish."

Two eggs of this Nightjar procured by Mr. Goodfellow at Piso, S.E. Mindanao, differ considerably from those already described by me from Cape Engaño, N.E. Luzon (cf. 'Ibis,' 1898, p. 246). Most of the markings in the present specimens are much smaller, more rounded, and well-defined, some of the surface-markings, especially those round the larger end of one of the eggs, being of a very deep brown. They measure respectively 1.28 by .85 and 1.2 by .83 inch.

63. Caprimulgus griseatus.

Caprimulgus griseatus Wald.; Grant & Whitehead, Ibis, 1898, p. 245, pl. vi. fig. 7 (egg); McGregor & Worcester, p. 57.

a. d. Punta Cabatam, April. No. 375.

b. d. Davao, May. No. 465.

"Male. Iris yellow; bill black; feet flesh-coloured."

"Female. Iris golden-brown; bill dark brown; feet greyish flesh-coloured."

A clutch of two eggs undoubtedly of this species was taken by Whitehead at Cape Engaño (cf. 'Ibis,' 1898, p. 245.

pl. vi. fig. 7). These are of the normal Goatsucker-type, but have the markings unusually pale.

Along with the specimens collected by Mr. Goodfellow there are seven glossy white eggs referred to this species, but they are almost certainly those of a *Merops*, and no doubt some mistake has been made in the identification.

64. Batrachostomus septimus.

Batrachostomus septimus Tweedd.; McGregor & Worcester, p. 50.

a, b. ♂♀. Mt. Apo, 8000 ft., Feb., March. Nos. 169, 258.

c. d. Piso, April. No. 365.

"Iris cinnamon or yellowish-cinnamon, eyelids dirty light brown; bill yellowish at the base, dusky brown towards the tip; feet and nails pale creamy flesh-coloured."

I have now before me eight examples of this species from Mindanao and Basilan, five males and three females; of these, two of the males and all the females may be regarded as belonging to the rufous phase of plumage, in which the upper parts are uniformly chestnut and shew very little trace of buff or sandy markings, and the outer webs of the long scapulars are buff or whitish-buff in the males and deep buff or rufous-buff in the females.

In the lighter phase of plumage, as shown in two adult males, both the upper and under parts are largely mixed with sandy or whitish-buff vermiculations and transverse bars of buff and black, especially on the top of the head and nape, and the outer webs of the long scapulars are pure white. The eighth example, a male, is intermediate between the two types, combining the rufous phase with white outer webs to the scapulars; while the under parts, especially on the belly, are paler sandy, marked and vermiculated with black.

Males of this species appear to have the black subterminal spot at the end of the scapulars larger and much better defined than the females.

The pair of birds obtained by Mr. Goodfellow near the

summit of Mt. Apo are in very complete *rufous* plumage, while the male from Piso is an unusually light example; this naturally led him to suppose that they belonged to different species, which is certainly not the case.

The bird procured at Piso was sitting when shot on a curious pad-like nest formed of spiders' webs and fibre, measuring about three inches in diameter. The nest was fastened to the rib of a palm-leaf.

65. Merops bicolor.

Merops bicolor Bodd.; Grant, Ibis, 1897, p. 243.

Merops americanus P. L. S. Müller; McGregor & Worcester, p. 56.

a-c. ∃ ♀. Davao, Feb. Nos. 118, 124, 136.

"Iris ruby-red; bill black; feet black or dark grey in the male, light grey in the female."

66. Cranorrhinus Leucocephalus.

Cranorrhinus leucocephalus (Vieill.); McGregor & Worcester, p. 56.

a, b. 3 et 3 imm. Davao, March. Nos. 314, 331.

c-e. ♂♀. Piso, April. Nos. 380, 384, 485.

"Iris deep red, eyelids orange (in the male) or yellow (in the female); bare skin of face and throat bright vermilion; bill crimson, with black and fawn stripes on the sides of the lower mandible; feet black, soles white."

67. Penelopides affinis.

Penelopides affinis Tweedd.; McGregor & Worcester, p. 56. a-c. β ? . Piso, March, April. Nos. 330, 369, 484.

d-i. ♂♀ et ♂ imm. Davao, Feb., April. Nos. 100, 334, 408, 468, 487, 490.

"Male. Iris deep red; bare skin of face and throat milky-white; bill whitish-horn at the tip, black and dull red at the base; feet blackish-grey or blackish-brown."

"Female. Iris deep red; bare skin of face and throat indigo-blue; bill horn-white at the tip, black and red at the base; feet black."

68. Hydrocorax mindanensis.

Hydrocorax mindanensis (Tweedd.); McGregor & Worcester, p. 55.

a. \(\rm \). Mt. Apo, 7000 ft., March. No. 297.

b-e. д ?. Davao, April. Nos. 315, 410, 440, 469.

"Iris pale blue; bill deep red at the base, yellow on the intermediate portion, and dark horn-coloured at the tip; feet scarlet or orange-scarlet, nails dark horn-coloured."

69. HALCYON HOMBRONI.

Halcyon hombroni (Bonap.); McGregor & Worcester, p. 55.

a, b. ♂ ♀. Mt. Apo, 8000 ft., March. Nos. 252, 300 a. "Iris dark brown; bill bright scarlet, blackish down the ridge of the culmen; feet and nails old-gold-coloured."

70. HALCYON CHLORIS.

Halcyon chloris (Bodd.); McGregor & Worcester, p. 55. a-d. ♂♀. Davao, Feb. Nos. 119, 133, 137, 139.

"Iris brown; bill black, basal half of lower mandible white; feet brownish-black, soles yellowish."

71. HALCYON WINCHELLI.

Halcyon winchelli Sharpe; McGregor & Worcester, p. 51. a. J. Davao, April. No. 396.

"Iris very dark brown; bill black, lower mandible white at the base; feet light olive-green, nails black."

72. HALCYON GULARIS.

Halcyon gularis (Kuhl); McGregor & Worcester, p. 54. a-g. ♂♀. Davao, April. Nos. 395, 420, 445, 470, 478, 480, 483.

"Iris dark brown, rim of eyelids crimson or red; bill dull sealing-wax red, lighter and brighter towards the base; feet vermilion or coral-red, nails black."

73. CEYX MINDANENSIS.

Ceyx mindanensis Steere; McGregor & Worcester, p. 53. a. \(\). Maputi, May. No. 423.

"Iris dark brown; bill, feet, and nails brightest vermilion."

In spite of what Mr. Worcester has written (cf. Occ. Pap. Minnesota Acad. i. no. 1, p. 47; and McGregor & Worcester, p. 53) I cannot help thinking that he is mistaken in uniting C. mindanensis Steere with C. basilanica Steere. The types of these two species are now in the British Museum. As pointed out by Prof. Steere, the latter species lacks the violet and black spot preceding the white spot on the side of the neck, and has much more chestnut on the secondary quills and wing-coverts.

These characters appear to be quite constant, and I consider that *C. basilanica* should be maintained.

74. CEYX GOODFELLOWI.

Ceyx goodfellowi Grant, Bull. B. O. C. xvi. p. 17 (1905).

a. d. Piso, May. No. 429. (Type of the species.)

Adult male. Most nearly allied to C. malamani Steere, but the back, rump, and upper tail-coverts are of a brilliant ultramarine-blue, tinged with cobalt on the middle of the lower back and rump; the feathers of the crown and nape are also tipped with much the same brilliant colour; the wing-coverts and scapulars, like those of C. malamani, are of a deep purplish-blue.

"Iris dark brown; bill, feet, and nails bright vermilion." Total length 5.0 inches; culmen 1.55; wing 2.5; tail 0.85; tarsus 0.4.

Messrs. Bourns and Worcester [cf. Occ. Pap. Minnesota Acad. i. no. 1, p. 47 (1894)] have united C. malamani Steere with C. bournsi Steere, stating that they have a practically unbroken series of specimens between these two very different types. I think that their conclusions may probably require modification, for it would appear that the young of C. malamani has the middle of the lower back and rump much lighter than in the adult. Bourns and Worcester write that "in one case where the parent and offspring were killed at one discharge of the gun they exhibited marked differences in colour"—a statement which seems to bear out the theory that the differences in plumage are due to age. A young example of C. bournsi has likewise the middle of the lower

back and rump silvery-blue, much paler than in the adult, which is of a turquoise-blue.

75. ALCYONE ARGENTATA.

Alcyone argentata (Tweedd.); McGregor & Worcester, p. 52.

a. ♀. Mapugba River, May. No. 431.

"Iris very dark brown; bill black, inside of mouth salmon-coloured; feet and nails brightest vermilion."

This example agrees exactly with the type from Dinagat.

76. ALCEDO ISPIDA.

Alcedo ispida Linn.; Grant, Ibis, 1895, p. 261.

Alcedo bengalensis Briss.; McGregor & Worcester, p. 52.

a, b. ♂♀. Piso, April. Nos. 364, 373.

c-e. ♂♀. Davao, April. Nos. 387, 389, 399.

"Male. Iris brown; bill black, dull red at the base; feet coral-red, nails black."

"Female. Iris brown; bill black, lower mandible salmonred; feet vermilion or yellowish coral-red, nails black."

77. Pelargopsis gigantea.

Pelaryopsis gigantea Walden; McGregor & Worcester, p. 52.

a. ♀. Piso, April. No. 378.

b-d. ♂♀. Davao, April, May. Nos. 390, 413, 486.

e, f. 3 imm. Samal Island, May. Nos. 427, 438.

"Iris dark brown, rim of eyelids red; bill sealing-wax red, shading into blackish at the tip; legs coral-red."

78. Eurystomus orientalis.

Eurystomns orientalis (Linn.); McGregor & Worcester, p. 51.

a. ♀. Daliaon, 3rd Feb. No. 103.

b-e. ♂♀. Davao, Feb. Nos. 126, 128, 142, 195.

"Iris dark brown, eyelids red; bill coral-red tipped with black, gape and inside of mouth yellow; feet coral-red, nails black."

79. Loriculus apicalis.

Loriculus apicalis Souancé: McGregor & Worcester, p. 50.

a. d. Mt. Apo, 8000 ft., March. No. 301.

b, c. 3 9. Taudaya, 5000 ft., March. No. 304.

d. S. Piso, May. No. 332.

e-g. ♂♀. Davao, March and May. Nos. 307, 417, 447.

"Iris brown; bill and cere orange-red or scarlet; feet pale orange, nails black."

80. Bolbopsittacus mindanensis.

Bolbopsittacus mindanensis Steere; McGregor & Worcester, p. 49; Grant, Bull. B. O. C. xvi. no. exviii. p. 17, no. exix. p. 36 (1905).

a-c. ∂ ♀. Davao, Feb., May. Nos. 144, 448, 466.

d-h. ♂♀. Piso, April. Nos. 342, 345, 349, 361, 475.

"Male. Iris brownish; bill grey at the base, black towards the tip; feet grey, slightly washed with pale green."

"Female. Iris brown; upper mandible grey at the base, shading into darker towards the tip, lower mandible grey; feet grey."

81. TANYGNATHUS LUCIONENSIS.

Tanygnathus lucionensis (Linn.); Grant, Ibis, 1896, p. 561; 1897, p. 248; McGregor & Worcester, p. 49.

a-c. β et β imm. Davao, March. Nos. 120, 306, 310. d. φ . Piso, April.

"Male. Iris cream-coloured, shading into olive-green near pupil; bill red, yellowish towards the tip; cere black; feet greyish-olive."

"Female. Iris pale olive-green, shading into yellowish-cream on the outer ring; upper mandible coral-red, lower of a more yellowish tinge; feet dark greenish slate-coloured."

82. Prioniturus discurus.

Prioniturus discurus Vieill.; Grant, Ibis, 1895, p. 263;
1896, p. 560; 1897, p. 248; McGregor & Worcester, p. 49.
a, b. ♂♀. Davao, Feb. Nos. 102, 123.

c-h. ♂♀. Piso, April. Nos. 344, 348, 376, 415, 472, 482.

"Iris light brown; bill pale greyish-white or bluish-white; feet grey, sometimes washed with greenish."

Mr. Goodfellow procured three eggs of this species from a hollow tree at Piso. They are of a rounded-oval shape, pure white, and almost devoid of gloss. They measure respectively 1.25 by 1.05 inch, 1.25 by 0.99, and 1.2 by 1.0.

83. PRIONITURUS WATERSTRADTI.

Prioniturus waterstradti Rothschild, Bull. B. O. C. xiv. no. evi. p. 71 (1904); McGregor & Worcester, p. 49.

a-d. ♂♀. Mt. Apo, 8000 ft., March. Nos. 167, 232, 243, 261.

"Iris greyish-brown; bill bluish-white; feet and nails pale bluish-grey."

This interesting species of Racquet-tailed Parrot is new to the British Museum.

84. CACATUA HÆMATUROPYGIA.

Cacatua hæmaturopygia (P. L. S. Müller); McGregor & Worcester, p. 48.

a-c. 3 \circ . Daliaon, 4th Feb. Nos. 106, 112, 113.

"Iris dark brown (in the male) or red (in the female), bare skin round eyes white or pinkish-white; bill bluish-white."

85. Trichoglossus johnstoniæ.

Trichoglossus johnstoniæ Hartert, Bull. B. O. C. xiv. p. 10 (1903); Goodfellow, Avicult. Mag. (n. s.) iv. p. 83, pl. (1906); McGregor & Worcester, p. 48.

a-d. ♂♀. Mt. Apo, 8000 ft., March. Nos. 231, 268, 283, 293 a.

"Iris red; bill yellowish-scarlet; cere black; feet grey or pale greenish-grey."

The female appears to have the yellow basal portion of the feathers of the under parts paler yellow than in the male.

An interesting account of Mrs. Johnstone's Parroquet, written by Mr. Goodfellow, will be found in the 'Avicultural Magazine,' as quoted above. A pair of this species living in Mrs. Johnstone's aviary at Burrswood, Sussex, has succeeded in rearing young birds. This species is new to the British Museum.

86. PSEUDOPTYNX MINDANENSIS.

Pseudoptynx mindanensis Grant, Bull. B. O. C. xvi. p. 99 (1906).

a. d. Davao, May. No. 467. (Type of the species.)

Male adult. Nearly allied to P. philippensis (Gray), from which it differs in being somewhat larger and in the following points:—The general colour of the upper parts is much darker, the feathers being brownish black, and rather narrowly margined with sandy rufous, instead of bright tawny-buff; the primary-quills are dark brown, with only faint traces of buff markings; the secondaries similar, with faintly indicated greyish buff transverse markings; the tail-feathers brown, with whitish or whitish buff transverse markings, rather faintly indicated on the outer webs; and the under parts more heavily streaked with blackish. "Iris light brownish gold; bill whitish towards the tip, bluish grey at the base; feet pale grey; nails white at the base, grey at the tip."

P. mindanensis, type, ♂: total length ca. 19.5 inches; culmen 2.0; wing 14.8; tail 7.3; tarsus 3.0.

P. philippensis, ♂ (Benguet District, Luzon, Whitehead): total length ca. 19.0 inches; culmen 1.8; wing 13.7; tail 7.1; tarsus 1.6. ♀ (Benguet District, Luzon, Whitehead): total length ca. 19.0 inches; culmen 1.9; wing 13.8; tail 6.8; tarsus 2.7.

Of the six examples of *P. philippensis* in the British Museum, Whitehead's specimens, measured above, are the largest.

87. Falco severus.

Falco severus Horsf.; McGregor & Worcester, p. 45.

a, b. ♂♀. Piso, April. Nos. 360, 363.

 $c, d. \circ et \circ imm.$ Davao, April. Nos. 397, 401.

"Iris very dark brown; cere and bare skin round eyes deep yellow; upper mandible light slate-coloured at the base, black towards the tip, lower mandible yellowish at the base; feet chrome-yellow, nails black."

Two of the specimens have the colour of the iris marked as yellow; no doubt this is a slip of the pen for brown.

88. MICROHIERAX MERIDIONALIS.

Microhierax meridionalis Grant, Ibis, 1897, p. 220; McGregor & Worcester, p. 44.

a. ♀. Davao, Feb. No. 122.

b, c. ♀. Piso, April. Nos. 371, 383.

"Iris dark brown; bill, cere, and feet black."

The wing-measurements vary from 4.5 to 4.65 inches.

An egg, believed to be that of this species, was taken by Mr. Goodfellow at Piso; he has supplied me with the following note:—"I believe this egg belongs to the Little Falconet (glossy black, with white breast). It was in a hole in the same tree as the Racquet-tailed Parrots, but after cutting down the tree there were so many holes that it was difficult to know which was that of the Falconets', although they flew out when we were cutting through the tree."

There is no reasonable doubt that this egg is correctly identified. It closely resembles the egg of the Burmese Falconet and is of a regular oval shape, devoid of gloss, and of a uniform yellowish-white colour. It measures 1.2 by .93 inch.

89. BAZA MAGNIROSTRIS.

Baza magnirostris Gray; McGregor & Worcester, p. 44. a. 2 vix ad. Davao, Feb. No. 140.

"Iris brown; upper mandible black, lower slate-coloured; feet whitish yellow."

The present example of this rare Cuckoo-Falcon appears to be a younger bird, having all the feathers of the crown and nape reddish buff with dark middles. In the typical specimen in the British Museum these parts are much darker, and the rufous-buff edges are much reduced in width. As in the type-specimen, the under wing-coverts are uniform pale rufous. In the Indian species, B. jerdoni, the under wing-coverts are white with chestnut tips, giving these parts a spotted appearance, and the chestnut bars on the breast and belly are very wide. It was at one time considered uncertain whether the type-specimen described by G. R. Gray had really come from South Luzon; but there is now no

longer any room for doubt in the matter, for McGregor and Worcester (t. c.) have also recorded this bird from Mindanao.

90. Pernis cristatus.

Pernis cristatus Cuv.; Grant, Ibis, 1897, p. 213.

Pernis ptilonorhynchus Temm.; McGregor & Worcester, p. 44.

a. d. Daliaon, Feb. No. 197.

"Iris yellow; bill black, greyish at the base of the lower mandible; feet chrome-yellow."

The longest crest-feather measures 2.15 inches.

91. Elanus hypoleucus.

Elanus hypoleucus Gould; McGregor & Worcester, p. 44. a. . Daliaon, May. No. 411.

"Iris orange-red, eyelids yellow; bill black; cere pale lemon-yellow; feet pale yellow, nails black."

92. Haliastur intermedius.

Haliastur intermedius Gurney; McGregor & Worcester, p. 43.

a. ♀. Davao, April. No. 493.

"Iris golden-brown; cere primose-yellow; upper mandible pale yellowish-grey, lower mandible pale grey; feet yellow, nails black."

93. Butastur indicus.

Butastur indicus (Gmel.); McGregor & Worcester, p. 43. a, b. 3. Davao, Feb. Nos. 114, 117.

"Iris bright yellow, eyelids chrome-yellow; bill black at the tip, light horn-coloured towards the base; cere and gape deep chrome; feet chrome-yellow."

94. Spilornis holospilus.

Spilornis holospilus (Vig.); Grant, Ibis, 1896, p. 528; McGregor & Worcester, p. 42.

a. Not quite adult. Mt. Apo, 8000 ft., Feb. No. 110.

b, c. Adult et \mathcal{J} imm. Davao, March and May. Nos. 311, 441.

d-f. \circ . Piso, March and April. Nos. 324, 356, 381.

"Iris yellow; skin of face yellow; bill grey at the base, black at the tip, greenish about the nostrils; feet yellow."

The immature male from Davao is in an interesting stage of plumage: the chest and upper breast being clad with the chestnut and white-spotted feathers of the adult, while the lower breast and belly are in the white plumage of immaturity, conveying the impression at the first glance that the specimen is a semi-albino. A somewhat older bird from Mt. Apo resembles the adult, but the under wing-coverts are mostly white. As I have already pointed out in the paper quoted above, birds of this species from Mindanao and Basilan are smaller than those from Luzon, and in the present instance the wing-measurements of five specimens vary from 12.7 to 13.2 inches.

95. Accipiter manillensis.

Accipiter manillensis Meyen; Grant, Ibis, 1897, p. 212; McGregor & Worcester, p. 41.

a. φ. Mt. Apo, 8000 ft., March. No. 221.

"Iris bright yellow, rim of cyclids chrome-yellow; bill slate-coloured at the base, black towards the tip; cere olivegreen; feet pale yellow, nails black."

96. ASTUR SOLOENSIS.

Astur soloensis (Lath.); Grant, Ibis, 1896, p. 104; McGregor & Worcestor, p. 41.

a. Adult. S.E. Mindanao. (Original label lost.)

97. ASTUR TRIVIRGATUS.

Astur trivirgatus (Temm.); Grant, Ibis, 1897, p. 212; McGregor & Worcester, p. 41.

a. ♀ imm. Davao, Feb. No. 107.

"Iris bright yellow, eyelids greenish-yellow; upper mandible black, lower slate-coloured; cere yellowish-green; feet chrome-yellow."

98. Dupetor flavicollis.

Dupetor flavicollis (Lath.); McGregor & Worcester, p. 36. a. Q. Davao, May. No. 416.

"Iris madder-red, with a very narrow inner ring of gold;

upper mandible black, brown along the cutting-edge, lower mandible brown; feet dark brown."

99. Ardetta sinensis.

Ardetta sinensis (Gmel.); McGregor & Worcester, p. 35.

a. d. Davao, April. No. 489.

"Iris yellow, shading into cream round the pupil; upper mandible light brown at the base, remainder black, lower mandible and bare skin of the face pale yellowish-green; feet pale yellowish-green, nails pale brown."

100. Bubulcus coromandus.

Bubulcus coromandus (Bodd.); McGregor & Worcester, p. 35.

a. d. Davao, March. No. 319.

"Iris light yellow; bill and bare skin round eyes yellow; legs yellowish, feet greenish-black."

101. Butorides Javanica.

Butorides javanica (Horsf.); McGregor & Worcester, p. 34.

a-c. ∂ et ♀ imm. Davao, April, May. Nos. 409, 419, 488.

d. 3. Piso, April. No. 471.

"Iris yellow; bare skin of the face greenish-yellow; bill black, base of the lower mandible yellowish-green; feet deep yellow, nails light horn-coloured."

102. Garzetta garzetta.

Egretta garzetta (Linn.); McGregor & Worcester, p. 33.

a. ♀. Davao, May. No. 442.

"Iris pale yellow; bare skin of face bright yellow; bill black, base of lower mandible yellow; feet and front of legs black, back of legs and soles pale yellowish-green."

103. DISSURA EPISCOPUS.

Dissura episcopus (Bodd.); Sharpe, Cat. Birds B. M. xxvi. p. 294 (1898).

Dissoura episcopus McGregor & Worcester, p. 31.

a. d. Davao, May.

"Iris brown; bill Indian-red, black towards the base; bare skin of the face light slate-coloured; legs and feet Indian-red."

104. Totanus brevipes.

Heteractitis brevipes (Vieill.); McGregor & Worcester. p. 26.

a, b. ♂♀. Piso, April. Nos. 353, 377.

"Iris brown; bill black; base of lower mandible and feet yellow-ochre."

105. Numenius variegatus.

Numenius variegatus Scop.; McGregor & Worcester, p. 24.

a. d. Piso, April. No. 370.

"Iris brown; bill black, base of lower mandible yellow-ochre; feet grey."

106. ÆGIALITIS DUBIA.

Ægialitis dubia (Scop.); McGregor & Worcester, p. 23.

a. ♀. Davao, May. No. 452.

"Iris very dark brown, eyelids fleshy and chrome-yellow; bill black, base of lower mandible deep yellow; feet greyish flesh-coloured."

107. LARUS RIDIBUNDUS.

Larus ridibundus Linn.; McGregor & Worcester, p. 21.

a. d. Davao, May. No. 496.

108. GALLICREX CINEREA.

Gallicrex cinerea (Lath.); McGregor & Worcester, p. 18.

a. d. Davao, May. No. 462.

"Iris brown; bill yellow, searlet at the base, frontal shield fleshy-pink; feet ivory-grey, slightly greenish at the joints, nails greyish-white."

109. Amaurornis olivacea.

Amaurornis olivacea (Meyen); McGregor & Worcester, p. 17.

a. d. Davao, April. No. 393.

"Iris ruby-red; bill pale green, slightly yellowish; feet pale olive-brown; joints yellowish in front."

110. Hypotænidia torquata.

Hypotænidia torquata (Linn.); McGregor & Worcester, p. 16.

a, b. ♀ vix ad. et imm. Davao, Feb. Nos. 138, 196.

"Iris blood-red (vix adult) or golden-brown (immature); bill black; feet and nails ash-coloured."

The nearly adult female has the chin and middle of the throat whitish, and the chestnut band across the chest interrupted in the middle; in other respects it resembles the adult. The immature bird, with the wing about one-third grown, has a wide olive-brown band across the chest.

111. Hypotænidia striata.

Hypotænidia striata (Linn.); McGregor & Worcester, p. 15.

a. 3. Davao, Feb. No. 193.

"Iris burnt-sienna; bill black, reddish towards the base; feet blackish-slate."

112. CHALCOPHAPS INDICA.

Chalcophaps indica (Linn.); McGregor & Worcester, p. 14.

a. d. Piso, May. No. 436.

b. 3. Davao, May. No. 449.

"Iris dark brown, rim of eyelids crimson; bill purplish at the base, bright red at the tip; feet dark purplish-red."

113. Turtur dussumieri.

Turtur dussumieri (Temm.); McGregor & Worcester, p. 13.

a. d. Davao, May. No. 446.

"Iris reddish-gold; bill leaden-coloured, purplish at the gape; feet red."

114. COLUMBA GRISEIGULARIS.

Columba griseigularis (Wald. & Layard); McGregor & Worcester, p. 13.

a-i. ♂♀. Mt. Apo, 8000 ft., Feb., March. Nos. 157, 168, 208, 259, 295 a, 296 a, 297, 298, 299 a.

"Iris golden (reddish-gold), eyelids crimson; bill yellowish

white at the tip, crimson at the base; feet dull bluish or purplish red, nails whitish horn-coloured."

An egg of this species was procured on Mt. Apo; it is of a long rather pointed oval shape, pure white and somewhat glossy. It measures 1.66 by 1.1 inch.

115. PTILOCOLPA MINDANENSIS.

Ptilocolpa mindanensis Grant, Bull. B. O. C. xvi. p. 16 (1905).

a. J. Mt. Apo, 8000 ft. March. No. 240. (Type of the species.)

Adult male. Very similar to the male of P. nigrorum Whitehead, but with the chin, throat, and upper part of the chest nearly pure white, instead of grey, and the breast deep greyish-black. "Iris creamy-white; eyelids pale grey; bill scarlet at the base, pinkish-white towards the tip; feet dull purple."

Total length about 13.0 inches; wing 8.1; tail 4.5.

116. CARPOPHAGA POLIOCEPHALA.

Zonophaps poliocephala (Hartl.); McGregor & Worcester, p. 12.

a. d. Mapugba River, May. No. 421.

"Outer ring of the iris red, inner ring yellow, eyelids crimson; bill slate-black; feet blood-red, nails horn-coloured."

117. CARPOPHAGA CHALYBURA.

Carpophaga chalybura Bonap.; Grant, Ibis, 1894, p. 521; 1897, p. 249.

Muscadivora ænea (Linn.); McGregor & Worcester, p. 11. a, b. 3. Piso, April. Nos. 355, 495.

"Iris blood-red; bill light bluish grey, darker at the base; feet red."

118. PTILOPUS OCCIPITALIS.

Ptilopus occipitalis G. R. Gray; Grant, Ibis, 1897, p. 249. Leucotreron occipitalis McGregor & Worcester, p. 10.

a-p. ♂ ♀. Mt. Apo, 8000 ft., Feb. and March. Nos. 149, 151, 155, 174, 200, 206, 220, 253, 262, 263, 266, 280, 281, 287, 288.

q. 8. Mapugba River, May. No. 430.

"Iris golden-olive, eyelids pale grey; bill scarlet at the base, vellow at the tip; feet bright coral-red; nails black."

119. Phabotreron brevirostris.

Phabotreron brevirostris Tweed.; Grant, Ibis, 1897, p. 249. Phapitreron brevirostris McGregor & Worcester, p. 10.

a-c. ♂♀. Davao, Feb., March. Nos. 134, 191, 309.

d. 3. Piso, April. No. 379.

"Iris with a broad inner ring of violet or purple and a narrow outer ring of blue; bare skin round the eyes primrose; bill black; feet red, purplish red, or coral-red."

120. Phabotreron amethystina.

Phabotreron amethystina (Bonap.); Grant, Ibis, 1897, p. 249.

Phapitreron amethystina McGregor & Worcester, p. 10.

a-f. ♂♀. Mt. Apo, 8000 ft., Feb., March. Nos. 194, 218, 228, 246, 291 a, 296.

"Iris golden-brown; bare skin round eyes pinkish, sometimes shading into blue behind the eyes; bill black; feet red."

121. Osmotreron vernans.

Osmotreron vernans (Linn.); McGregor & Worcester, p. 9. a. 3 vix ad. Davao, May. No. 464.

"Iris creamy-yellow, with a very narrow inner ring of dark blue; basal part of the bill greenish-yellow, tip pale bluish grey; feet pinkish red."

122. Osmotreron axillaris.

Osmotreron axillaris (Bonap.); McGregor & Worcester, p. 9.

u-f. ♂ ♀. Piso, April. Nos. 333, 340, 354, 366, 368, 372.

"Iris turquoise-blue, rim of eyelids yellowish green; basal half of bill red, tip greenish white; feet and nails pale bluish grey."

123. Gallus gallus.

Gallus gallus (Linn.); McGregor & Worcester, p. 8.

a, b. ♂♀. Mt. Apo, 8000 ft., March. Nos. 207, 294 a. "Iris reddish-gold; upper mandible black, lower mandible pale whitish horn-coloured; feet pale slate-coloured."

124. Megapodius cumingi.

Megapodius cumingi Dillw.; McGregor & Worcester, p. 7 a. 3 juv. Mt. Apo, 8000 ft., March. No. 297 a.

 $b, c. \ \ \beta \ \$?. Piso, April. Nos. 367, 473.

d. ♀. Mapugba River, May. No. 437.

"Iris dark golden-brown; bill black, dull yellow at the tip; feet black."

The immature bird resembles the adult in colour, but is about half the size.

A number of eggs of this species were sent home.

XXX.—On a Collection of Birds made by Mr. Geoffrey Archer during a Journey to the Ruwenzori Range. By F. J. Jackson, C.B., C.M.G. With Notes by R. Bowdler Sharpe, LL.D.

In 1902 my nephew, Geoffrey Archer, made an excursion to Ruwenzori, proceeding by way of Unyoro and the Albert Lake. The collection of birds from the latter place consisted chiefly of Waders, of which I was anxious to secure a good series, since much interest attaches to the winter-residences of the European *Charadriidæ*. Many species were plentiful on the Albert Lake and were very tame. My nephew went on the water in a 'dug-out,' and the birds, being accustomed to the native fishermen in similar canoes, were quite fearless and could be approached within a dozen yards.

For the whole distance between the shores of the Albert Lake and the escarpment good shooting may be had, although in quantity and variety it cannot be compared with that of East Africa. Thomas's Kob, Water-buck, Bush-buck, Harnessed Antelope, Hartebeeste, and the little Duykers were, however, all fairly common.

In the wet season this must be a grand place for Elephants, judging by their innumerable tracks. Buffalo-spoor was also plentiful, but none of the animals were seen. On Archer's return journey, however, he came up with a herd, which, he